

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 15878	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/US03/35231	International filing date (<i>day/month/year</i>) 03 November 2003 (03.11.2003)	(Earliest) Priority Date (<i>day/month/year</i>) 01 November 2002 (01.11.2002)
Applicant TODD C SACKTOR ET AL.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the Report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☒ Unity of invention is lacking (See Box II).

4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

Please See Continuation Sheet

5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No. _____



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.



None of the figures

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/352341

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claim Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claim Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claim Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
Please See Continuation Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-7

Remark on Protest

☐
☐

- The additional search fees were accompanied by the applicant's protest.
No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/35231

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C12Q 1/00, 1/68, 1/70; G01N 33/53, 33/567, 33/569
US CL : 435/4, 6, 7.1, 7.7, 7.71, 7.72

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 435/4, 6, 7.1, 7.7, 7.71, 7.72

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	MOSCAT, J. ET AL. The Atypical Protein Kinase Cs. EMBO Reports November 2000, Vol. 5 No. 5, pages 399-403, entire document.	1-7
A	SHAO, C.Y. ET AL. Atypical Protein Kinase C (PKC) Colocalizes with Tau- and Alpha-Synuclein-Related Inclusions in Neurodegenerative Disorders. Society for Neuroscience Abstracts 02-07 November 2002, Abstract 592.9, entire document.	1-7
A	SHAO C.Y. ET AL. Association of PKC, P62 And Ubiquitin with Inclusions of Neurodegenerative Disease. Society for Neuroscience Abstracts 08-12 November 2003, Abstract 203.22, entire document.	1-7
A	US 2003/0068310 A1 (YIN, J.C.P. ET AL.) 10 April 2003 (10.04.2003), entire document.	1-7
A	HOPF, F.W. ET AL. Atypical Protein Kinase C Is A Novel Mediator of Dopamine-Enhanced Firing in Nucleus Accumbens Neurons. The Journal of Neuroscience 26 January 2005, Vol. 25, No. 4, pages 985-989, entire document.	1-7

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search

15 March 2005 (15.03.2005)

Date of mailing of the international search report

12 APR 2005

Name and mailing address of the ISA/US

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Authorized officer

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Continuation of Item 4 of the first sheet:

Misspelling

APKC ISOFORMS IN NERVOUS SYSTEM DISORDERS AND CANCER

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group 1, claim(s) 1-7 drawn to a method of diagnosing a nervous system disorder.

Group 2, claim(s) 8-11, drawn to a method for identifying a compound useful for modulating the activity of an aPKC.

Group 3, claim(s) 12-21 and 24, drawn to a method for treating a nervous system disorder.

Group 4, claim(s) 22-23, drawn to an antibody.

Group 5, claim(s) 25-30, drawn to a method for constructing a transgenic animal.

Group 6, claim(s) 31-34, drawn to a method for screening DNA for a mutation or polymorphism.

Group 7, claim(s) 35-37, drawn to a method for diagnosing cancer.

The inventions listed as Groups 1-7 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

According to PCT Rule 13.2, unity of invention exists only when there is a shared same or corresponding special technical feature among the claimed inventions. Each group has a different special technical feature not shared by the remaining groups.

Group 1 has the special technical feature of method of diagnosing a nervous system disorder, which is not shared by any of the remaining groups.

Group 2 has the special technical feature of identifying a compound useful for modulating the activity of an aPKC, which is not shared by any of the remaining groups.

Group 3 has the special technical feature of method for treating a nervous system disorder, which is not shared by any of the remaining groups.

Group 4 has the special technical feature of antibody, which is not shared by any of the remaining groups.

Group 5 has the special technical feature of a transgenic animal, which is not shared by any of the remaining groups.

Group 6 has the special technical feature of method for screening DNA for a mutation or polymorphism, which is not shared by any of the remaining groups.

Group 7 has the special technical feature of method for diagnosing cancer, which is not shared by any of the remaining groups.

INTERNATIONAL SEARCH REPORT

PCT/US03/35231

Continuation of B. FIELDS SEARCHED Item 3:

WEST (USPT, PGPUBS, US OCR, JPO, EPO, DERWENT); NCBI (PUBMED); STN (BIOSCIENCE)

a PKC, aPKC gamma, immunoassay, immunocytochemistry, array, hybridizable probes, Alzheimers, Picks, PSP, CBD, PD, MSA